LIST OF U.S. CUSTOMS LABORATORY METHODS

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48-25	ISO 1924/2	Paper and Board -- Determination of Tensile Properties -- Part 2: Constant Rate of Elongation Method
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48-27	ASTM D 828	Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus
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48-30	ISO 7263	Corrugating Medium -- Determination of the Flat Crush Resistance After Laboratory Fluting

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48-40	TAPPI T 528	Solvent Holdout of Electrophotographic Base Paper
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48-43	ASTM D 590	Test Method for Petroleum Wax in Paper
48-	TAPPI T 263	Identification of Wood and Fibers from Conifers
48-45	TAPPI T 511	Folding Endurance of Paper (MIT Tester)
48-46	ASTM D 2176	Test Method for Folding Endurance of Paper by the M.I.T. Tester
48-47	TAPPI T 431	Ink Absorbency of Blotting Paper
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U.S. CUSTOMS LABORATORY METHODS

USCL Number 48-01 INDEX

Determination of Mechanical Pulp in Newsprint by the Strelis Method Using an Image Analyzer

SAFETY PRECAUTIONS

This method does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

0 SCOPE AND FIELD OF APPLICATION

This method is an application of the image analyzer (IA) to the microscopic determination of mechanical woodpulp in newsprint by the Strelis Method (2.1, 2.2). Newsprint, classified under HTSUS subheading 4801.00.00, must contain at least 65% by weight of woodpulp obtained by a mechanical process, and must meet other physical specifications as provided for in Note 3 of Chapter 48, Section X of the HTSUS

1 PRINCIPLE

Currently, the Strelis Method is used to determine the percentage of woodpulp fibers. This method consists of staining the woodpulp fibers with the Herzberg stain and counting them using a microscope, a process which is tedious and eye-straining. The IA includes computerized microscopical accessories which automate certain mechanical manipulations and related calculations. The following is an adaptation of the Strelis Method using the IA which proves to be fast and accurate.

2 REFERENCES

TAPPI T401 om-82B
Fiber Analysis of Paper and Paperboard,

Improved Method for the Fiber Analysis of Newsprint, I Strelis (Pulp and Paper Reports, P.P.R. No. 4
Pulp and Paper Institute of Canada, Pointe Claire, P.Q., Canada)

3 METHOD

3.1 Apparatus

3.1.1 Image analysis system composed of the following:

a. polarized light microscope with 20X objective lens

b. software which can perform counts, area and distance measurements, etc. (for example: the Bioquant System IV, the Meg-M Video Counting & Densitometry, or others)

c. hardware including a PC with hard disk and floppy disk drives, CGS, EGA, or VGA board, color graphics monitor (high resolution), color video camera, digitizing pad, and printer

3.1.2 Ordinary laboratory apparatus such as

the following:

a. glass slides (25 mm X 75 mm)
b. glass coverslips (25 mm square or 22 mm square)
c. dissecting needles
d. beakers (100 mL or 140 mL)
e. large test tubes (or 50-mL graduated conical polypropylene tubes with caps - Becton Dickinson Labware, Lincoln Park, NJ)
f. glass beads
g. Erlenmeyer flasks (125 mL or larger)
h disposable pipets (2 mL in 1/100)
I. Pasteur pipets
j. hot plate
k. magnetic stirrer

3.1.3 Filter paper used as cotton pulp (Carl Schleicher and Schuell Co. high quality analytical filter paper, or Whatman qualitative filter paper No. 1)

3.2 Reagents and Materials

3.2.1 Reagents:

a. Granular Zinc chloride ($ZnCl_2$)
b. Iodine
c. Potassium iodide (KI)
d. Deionized (distilled) water

3.2.2 Stains:

3.2.2.1 Prepare the Herzberg Stain as follows:

a. Add 25 mL of distilled water to 50 g of granular zinc chloride ($ZnCl_2$), and dissolve by stirring with a glass rod to make Solution A.

b. Dissolve 0.25 g of iodine and 5.25 g of potassium iodide (KI) in 12.5 mL of distilled water to make Solution B.

c. Mix 25 mL of Solution A with the entire Solution B.

d. Transfer to a narrow cylinder and let stand 12 to 24 hours until the solution becomes clear.

e. Pour the clear solution into a dark colored, glass-stoppered bottle, and add a few crystals of iodine.

f. Store the solution away from light. Prepare fresh stain every 2 or 3 months.

3.2.2.2 Graff's C and AZO stains - can be obtained from the Institute of Paper Science and Technology, 575 14th Street NW, Atlanta, GA 30318 - Phone (404) 853-9737

3.3 Sample Preparation

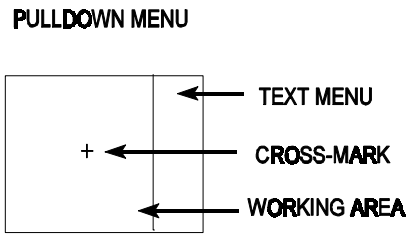
Weigh out approximately 200 mg of sample and 50 mg of filter paper (cotton pulp). The cotton pulp is used as an internal standard. Proceed to sample preparation as instructed in TAPPI Test Method T401 om-82B or the Strelis Method.

Note: A good sample defibration can also be accomplished by boiling for 5 minutes in a 1.0% solution of NaOH. Decant and wash 2-3 times with distilled water. Suspend the sample in a 0.5 N solution of HCL for 5 minutes, and wash 2-3 times with distilled water.

3.4 Image Analysis System Preparation

3.4.1 Cut two strips of masking tape approximately 1/16 inch by 1 inch and paste them onto the video monitor screen to make a cross-mark which is used as cross hairs. The cross-mark should be located at the center of the working area for a one-monitor system (FIGURE 1), or at the center of the screen of the video monitor for a two-monitor system.

FIGURE 1 One Monitor System



3.4.2 Using the instructions found in the software manual, create a customized routine for the analysis on the computer to record the fiber counts and to execute the calculations. Save the routine for other analyses.

4 PROCEDURE

4.1 Deposit three drops of Herzberg stain (or 2 drops of Graff's C and 1 drop of Herzberg stain) onto the microscope slide, using a Pasteur pipet. Place a coverslip over the sample and wait 1 to 3 minutes for the colors to develop.

4.2 Mount the slide on the microscope stage, turn to the 20X objective lens, and adjust the focus until the images are sharp on the monitor screen. The focusing needs to be adjusted throughout the counting. Cotton fibers will appear red (or wine red), chemical pulp fibers blue (various shades), and mechanical woodpulp yellow (or yellowish orange).

On a b/w monitor screen chemical pulp fibers appear darker than cotton fibers; they can also be differentiated by their size and morphology.

Note: An attempt should be made to identify the wood species so that a correct weight factor can be applied. For more details on wood species identification consult "The Practical Identification of Woodpulp Fibers" by Russell A.Parham and Richard L. Gray (TAPPI Press - TAPPI, Atlanta, GA), or "Paper Making Fibers - A Photomicrographic Atlas, Technical Publication #74" by W.A. Cote et al. (Syracuse University Press, Syracuse, NY).

4.3 Start the counting at a magnification of 200X, obtained by using the 20X objective lens and a 10X eyepiece, 2-3 mm from an upper corner of the coverslip and slowly move the slide horizontally. Count cotton (red) and chemical pulp (blue) fibers, but skip the blue nonwood fibers, each time they pass through the cross-mark on the monitor screen. Record the counts by clicking on the cursor button and by switching from one fiber to another as they appear on the screen.

4.4 Move the slide 5 mm vertically after one line is completed, and proceed with the counts in the opposite direction. Repeat this step until the entire area of the coverslip is done. The total fiber count should be at least 150 for each slide. Disregard the counts from any slide that does not give a total of 150 fibers.

4.5 Continue the fiber counts until three slides are completed. This constitutes one analysis. Perform the calculations. The final result for each sample is the average of three analyses.

Newsprint papers can be made of 100% mechanical woodpulp or a mixture of mechanical pulp and chemical pulp (mainly kraft, cellulose, and low yield or high yield sulfite). Consequently, there are instances where unbleached low yield sulfite pulp is used in addition to

kraft pulp. Low yield sulfite pulp fibers turn green (instead of blue) in the Herzberg or Graff's C stain. In this case, proceed with the counting of the red and blue fibers as usual. When the slide is done, rinse it off 3 to 4 times with distilled water. Carefully dry the slide on a water bath. Add several drops of the AZO stain to completely cover the fibers. Wait 5 to 10 minutes, drain off, and add fresh AZO stain (1-2 drops) to the slide. Place a coverslip over the sample, mount the slide on the microscope stage, and count the pink fibers (low yield sulfite) as chemical pulp fibers.

5 RESULTS

5.1 Calculations

5.1.1 Weight of chemical pulp:

$$\text{Wt. of chem. pulp} = \text{Wt. of cotton X } \frac{N \times WF}{N' \times 1.05}$$

where:

N = counted chemical pulp fibers

WF = weight factor for chemical pulp fibers

In general 0.90 (weight factor for hemlock, spruce, and balsam fir) can be used as weight factor for chemical pulp fibers because the wood species commonly used in the manufacture of newsprints have the same or fairly close weight factors.

N' = counted cotton fibers

1.05 = weight factor for cotton (For a more complete table of weight factors, see References 2.2 and Bibliography 6.3).

This equation can also be applied when a mixture of hard- and softwoods is used to make up the chemical pulp, because the weight factors are similar or so close that error in the calculation is minimal.

5.1.2 Weight of mechanical pulp:

This is the difference between the weight of the sample and the weight of chemical pulp obtained in step 1.

5.2 Calculate the percent composition by weight.

The results of this analysis are incorporated into the final laboratory report along with data obtained from other physical tests which must be performed to complete the analysis of newsprints.

5.3 Precision

The data obtained yield an average relative standard deviation of 1.39% and an average accuracy of approximately 1.0%.

6 BIBLIOGRAPHY

6.1 Harmonized Tariff Schedule of the United States (HTSUS), 1990, USITC Publication 2232

6.2 "A Color Atlas for Fiber Identification" by John H. Graff - off the press (The Institute of Paper Chemistry, now Institute of Paper Science and Technology, Atlanta, GA)

6.3 "The Practical Identification of Wood Pulp Fibers" by Russell A. Parham and Richard L. Gray (TAPPI Press -TAPPI, Atlanta, GA)

6.4 "Pulp and Paper: Chemistry and Chemical Technology" 3rd edition,

Volume III, edited by James P. Casey, John Wiley & Sons, Inc., New York, 1981

6.5 "The Identification of Textile Fibers" by Bruno Luniak, edited by E. Honegger, Sir Isaac Pitman & Sons, Ltd., London, 1953

6.6 TAPPI Test Method T259 om-83, "Species Identification of Nonwood Plant Fibers", PPI, Atlanta, GA

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-02

Index

ISO/TC 125
Conditioning Paper and Paperboard for Testing

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapters 48 and 49 of the Harmonized Tariff Schedule of the United States (HTSUS). This method describes the conditioning of these commodities using standard atmospheres, which includes humidity and temperature, which are necessary before analysis can occur. The application of this method is recommended for all these commodities.

2 REFERENCES

ISO/TC 125
Conditioning Paper and Paperboard for Testing

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-03 Index

TAPPI T 402
Standard Conditioning and Testing Atmospheres for Paper, Board, Pulp Handsheets, and Related Products

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapters 48 and 49 of the Harmonized Tariff Schedule of the United States (HTSUS). This method describes the standard atmospheres, which includes humidity and temperature, for normal preconditioning and conditioning, which are necessary for paper, paperboard products and fiberboard, before analysis can occur. The application of this method is recommended for all these commodities.

2 REFERENCES

TAPPI T 402
Standard Conditioning and Testing Atmospheres for Paper, Board, Pulp Handsheets, and Related Products

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-04 Index

ASTM D 685
Practice for Conditioning Paper and Paper Products for Testing

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapters 48 and 49 of the Harmonized Tariff Schedule of the United States (HTSUS). This method describes the standard atmospheres, which includes humidity and temperature for normal preconditioning and conditioning, which are necessary for paper, paperboard products and fiberboard, and procedures for special handling so that these materials may reach equilibrium with the respective atmospheres before analysis can occur. The application of this method is recommended for all these commodities.

2 REFERENCES

ASTM D 685
Practice for Conditioning Paper and Paper Products for Testing

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-05 Index

TAPPI T 555
Roughness of Paper and Paperboard (Print-Surf Method)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS) provides for the testing of paper and paperboard products. This method can be used to determine the roughness of paper and paperboard products under conditions that simulate the contact pressures of backing materials of the different types of printing nips. The application of this method is recommended for all these products.

2 REFERENCES

TAPPI T 555
Roughness of Paper and Paperboard (Print-Surf Method)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-06 Index

ISO 8791/4
Paper and Board -- Determination of Roughness/Smoothness (Air Leak Methods)

Leak Methods)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS) provides for the testing of paper and paperboard products. This method can be used to determine the roughness of paper and paperboard products under conditions that simulate the contact pressures of backing materials of the different types of printing nips. The application of this method is recommended for all these products.

2 REFERENCES

ISO 8791/4
Paper and Board -- Determination of Roughness/Smoothness (Air

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-07

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TAPPI T 479
Smoothness of Paper (Bekk Method)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS) provides for the testing of paper and paperboard products. This method can be used to determine the roughness of paper and paperboard products under conditions that simulate the contact pressures of backing materials of the different types of printing nips.

This particular method has been superceeded by the Roughness Print Surf Method. HTSUS, circa 1997.

2 REFERENCES

TAPPI T 479
Smoothness of Paper (Bekk Method)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-08

Index

ISO 2470
Paper and Board -- Measurement of Diffuse Blue Relflectance Factor (ISO Brightness)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Chapter 47of the Harmonized Tariff Schedule (HTSUS) covers paper and paperboard products. This is an alternate method that can be used to determine the brightness of these products.

2 REFERENCES

ISO 2470
Paper and Board -- Measurement of Diffuse Blue Reflectance Factor (ISO Brightness)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-09

Index

TAPPI T 452
Brightness of Pulp, Paper and Paperboard (Directional Reflectance at 457 nm)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Hand-made paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule (HTSUS). This method can be used to determine the brightness of these products.

2 REFERENCES

TAPPI T 452
Brightness of Pulp, Paper and Paperboard (Directional Reflectance at 457 nm)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-10

Index

ISO 2144
Paper and Board -- Determination of Ash

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper, paperboard, pulp of wood and other fibrous cellulosic materials are provided for in Chapters 47 and 48 of the Harmonized tariff Schedule. With these types of commodities, the sample must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 2144
Paper and Board -- Determination of Ash

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-11 Index

TAPPI T 413
Ash in Wood, Pulp, Paper and Paperboard: Combustion at 900EC

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper, paperboard, pulp of wood and other fibrous cellulosic materials are provided for in Chapters 47 and 48 of the Harmonized tariff Schedule. With these types of commodities, the sample must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 413
Ash in Wood, Pulp, Paper and Paperboard: Combustion at 900EC

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-12 Index

ISO 536
Paper and Board -- Determination of Grammage

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard, articles of paper pulp, and paper or paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These commodities must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 536
Paper and Board -- Determination of Grammage

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-13

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TAPPI T 410
Grammage of Paper and Paperboard (Weight per Unit Area)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard, articles of paper pulp, and paper or paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These commodities must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 410
Grammage of Paper and Paperboard (Weight per Unit Area)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-14

Index

ASTM D 646
Test Method for Grammage of Paper and Paperboard (Weight per Unit Area)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard, articles of paper pulp, and paper or paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These commodities must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ASTM D 646
Test Method for Grammage of Paper and Paperboard (Weight per Unit Area)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-15

Index

TAPPI T 478 wd-69
Ink Erasing Quality of Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Fine writing papers are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These papers shall retain good writing and typing quality, texture and surface appearance, without ink spreading after repeated erasures. This method is recommended when applicable.

2 REFERENCES

TAPPI T 478 wd-69
Ink Erasing Quality of Paper

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U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-16 Index

ISO 2758
Paper -- Determination of Bursting Strength

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 2758
Paper -- Determination of Bursting Strength

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-17

Index

ISO 2759
Board -- Determination of Bursting Strength

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 2759
Board -- Determination of Bursting Strength

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-18

Index

TAPPI T 403
Bursting Strength of Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 403
Bursting Strength of Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-19 Index

ASTM D 774
Test Method for Bursting Strength of Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ASTM D 774
Test Method for Bursting Stength of Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-20

Index

ISO 534
Paper and Board -- Determination of Thickness and Apparent Bulk Density of Apparent Sheet Density

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 534
Paper and Board -- Determination of Thickness and Apparent Bulk Density or Apparent Sheet Density

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-21

Index

TAPPI T 551
Thickness of Paper and Paperboard (Soft Platen Method)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). This is one of several methods that are used for various types of samples. With these types of commodities, the samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 551
Thickness of Paper and Paperboard (Soft Platen Method)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-22

Index

ASTM D 645
Test Method for Thickness of Paper and Paperboard

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States(HTSUS). With these types of commodities, they must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ASTM D 645
Test Method for Thickness of Paper and Paperboard

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-23

Index

TAPPI T 421
Qualitative (Including Optical Microscopic) Analysis of Mineral Filler and Mineral Coating of Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper, paperboard and articles thereof are provided for in Chapter 48 of the Harmonized Tariff Schedule (HTSUS). These types of commodities must be prepared before analysis can occur. This method is recommended when applicable.

2 REFERENCES

TAPPI T 421
Qualitative (Including Optical Microscopic) Analysis of Mineral Filler and Mineral Coating of Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-24 Index

ASTM D 686
Test Methods of Qualitative Examination of Mineral Filler and Mineral Coating of Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper, paperboard and articles thereof are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be prepared before analysis can occur. This method is recommended when applicable.

2 REFERENCES

ASTM D 686
Test Methods of Qualitative Examination of Mineral Filler and Mineral Coating of Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-25 Index

ISO 1924/2
Paper and Board -- Determination of Tensile Properties -- Part 2: Constant Rate of Elongation Method

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities are subject to tensile stress, web breakage during converting operations or printing. These samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 1924/2
Paper and Board -- Determination of Tensile Properties -- Part 2: Constant Rate of Elongation Method

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-26

Index

TAPPI T 494
Tensile Breaking Strength and Properties of Paper and Paperboard (Using Constant Rate of Elongation Apparatus)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities are subject to tensile stress, web breakage during converting operations or printing. These samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 494
Tensile Breaking Stength and Properties of Paper and Paperboard (Using Constant Rate of Elongation Apparatus)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-27 Index

ASTM D 828
Test Method for Tensile Properties of Paper and Paerboard Using Constant-Rate-of-Elongation Apparatus

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities are subject to tensile stress, web breakage during converting operations or printing. These samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ASTM D 828
Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-28

Index

ISO 1974
Paper -- Determination of Tearing Resistance (Elmendorf-Type Method)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities the tearing resistance is measured directly. These samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

ISO 1974
Paper -- Determination of Tearing Resistance (Elmendorf Method)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-29

Index

TAPPI T 414
Internal Tearing Resistance of Paper (Elmendorf-Type Method)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities the tearing resistance is measured directly. These samples must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 414
Internal Tearing Resistance of Paper (Elmendorf-Type Method)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-30 Index

ISO 7263
Corrugating Medium -- Determination of the Flat Crush Resistance After Laboratory Fluting

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities they must be conditioned before the crush resistance of a laboratory fluted strip of corrugating medium can be analyzed. This method is recommended when applicable.

2 REFERENCES

ISO 7263
Corrugating Medium -- Determination of the Flat Crush Resistance After Laboratory Fluting

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-31

Index

TAPPI T 809
Flat Crush of Corrugating Medium (CMT Test)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities they must be conditioned before the crush resistance of a laboratory fluted strip of corrugating medium can be analyzed. This method is recommended when applicable.

2 REFERENCES

TAPPI T 809
Flat Crush of Corrugating Medium (CMT Test)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-32 Index

ASTM D 4988
Test Method for Determination of Alkalinity of Paper as Calcium Carbonate (Alkaline Reserve of Paper)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities they must be conditioned before the crush resistance of a laboratory fluted strip of corrugating medium can be analyzed. This method is recommended when applicable.

2 REFERENCES

ASTM D 4988
Test Method for Determination of Alkalinity of Paper as Calcium Carbonate (Alkaline Reserve of Paper)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-33 Index

TAPPI T 554
X-Ray Analysis of Paper and Related Materials

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method is for quantitatively determining inorganic fillers in papers. This method is recommended when applicable.

2 REFERENCES

TAPPI T 554
X-Ray Analysis of Paper and Related Materials

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-34

Index

TAPPI T 471 wd-73
Testing Analytical Filter Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method is recommended when applicable.

2 REFERENCES

TAPPI T 471 wd-73
Testing Analytical Filter Papers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-35

Index

ISO 535
Water Absorbency of Bibulous Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method determines the amount of time required for an unsized and absorbent paper, to completely absorb a specified quantity of water. This method is recommended when applicable.

2 REFERENCES

ISO 535
Water Absorbency of Bibulous Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-36

Index

TAPPI T 432
Water Absorbency of Bibulous Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method determines the amount of time required for an unsized and absorbent paper, to completely absorb a specified quantity of water. This method is recommended when applicable.

2 REFERENCES

TAPPI T 432
Water Absorbency of Bibulous Papers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-37

Index

ASTM D 824
Test Method for Rate of Absorption of Water by Bibulous Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method determines the amount of time required for an unsized and absorbent paper, to completely absorb a specified quantity of water. This method is recommended when applicable.

2 REFERENCES

ASTM D 824
Test Method for Rate of Absorption of Water by Bibulous Papers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-38

Index

TAPPI T 454
Turpentine Test for Voids in Glassine and Greaseproof Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method determines the relative times or rate at which oil or grease may be expected to penetrate specific papers (greaseproof, glassine or parchment). This method is recommended when applicable.

2 REFERENCES

TAPPI T 454
Turpentine Test for Voids in Glassine and Greaseproof Papers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-39

Index

TAPPI T 504
Glue in Paper
(Qualitative and Quantitative Determination)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. This method is a qualitative and quantitative method of determining animal glue and gelatin in paper. This method is recommended when applicable.

2 REFERENCES

TAPPI T 504
Glue in Paper (Qualitative and Quantitative Determination)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-40

Index

TAPPI T 528
Solvent Holdout of Electrophotographic Base Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). These types of commodities must be conditioned before analysis. The functional properties of electrophotographic base paper, is such that it must have a required degree of solvent holdout to achieve optimum electrophotographic response. This method measures that solvent holdout. This method is recommended when applicable.

2 REFERENCES

TAPPI T 528
Solvent Holdout of Electrophotographic Base Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-41

Index

TAPPI T 405
Petroleum Wax in Impregnated Papers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method determines quantitatively the amount of petroleum wax in impregnated paper. This method is recommended when applicable.

2 REFERENCES

TAPPI T 405
Petroleum Wax in Impregnated Papers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-42

Index

TAPPI T 497
Surface Wax on Waxed Paper and Paperboard

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method determines the amount of wax on the surface of paper and paperboard. This method is recommended when applicable.

2 REFERENCES

TAPPI T 497
Surface Wax on Waxed Paper and Paerboard

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-43

Index

ASTM D 590
Test Method for Petroleum Wax in Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method determines quantitatively the amount of petroleum wax in wax-impregnated or so-called “waxed” paper. This method is recommended when applicable.

2 REFERENCES

ASTM D 590
Test Method for Petroleum Wax in Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-44

Index

TAPPI T 263
Identification of Wood and Fibers from Conifers

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and pulp products are provided for in Chapters 47 and 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method deals with the identification of species of wood from conifers in pulp and paper and can also be used to identify wood. This method is recommended when applicable.

2 REFERENCES

TAPPI T 263
Identification of Wood and Fibers from Conifers

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-45

Index

TAPPI T 511
Folding Endurance of Paper (MIT Tester)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be conditioned before analysis. This method describes the use of the MIT-type apparatus for the determination of folding endurance of paper, and is also useful for measuring the deterioration of paper upon aging. This method is recommended when applicable

2 REFERENCES

TAPPI T 511
Folding Endurance of Paper (MIT Tester)

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-46

Index

ASTM D 2176
Test Method for Folding Endurance of Paper by the M.I.T. Tester

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be conditioned before analysis. This method describes the use of the M.I.T.-type folding apparatus for the determination of folding endurance of paper. This method is recommended when applicable.

2 REFERENCES

ASTM D 2176
Test Method for Folding Endurance of Paper by the M.I.T. Tester

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-47

Index

TAPPI T 431
Ink Absorbency of Blotting Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be conditioned before analysis. This method is used to determine the rate at which blotting papers absorb writing inks. This method is recommended when applicable.

2 REFERENCES

TAPPI T 431
Ink Absorbency of Blotting Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-48 Index

ASTM D 2177
Test Method for Ink Absorption of Blotting Paper

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be conditioned before analysis. This method is used to determine the rate at which blotting papers absorb writing inks. This method is recommended when applicable.

2 REFERENCES

ASTM D 2177
Test Method for Ink Absorption of Blotting Paper

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-49

Index

TAPPI T 456
Wet Tensile Breaking Strength of Paper and Paperboard

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method is used to determine the tensile strength of paper and paperboard after being saturated with water. The tensile breaking strength is evaluated in accordance with "The Tensile Breaking Strength and Elongation of Paper and Paperboard (Using Pendulum Type Tester)" in TAPPI T404 and TAPPI T494. This method is recommended when applicable.

2 REFERENCES

TAPPI T 456
Wet Tensile Breaking Strength of Paper and Paperboard

U.S. CUSTOMS LABORATORY METHODS

USCL METHOD 48-50

Index

TAPPI T 459
Surface Stength of Paper
(Wax Pick Test)

SAFETY PRECAUTIONS

This method does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health pract ices and determine the applicability of regulatory limitations prior to its use.

1 SCOPE AND FIELD OF APPLICATION

Paper and paperboard products are provided for in Chapter 48 of the Harmonized Tariff Schedule of the United States (HTSUS). With these types of commodities, the sample must be prepared before analysis. This method is applicable to uncoated and coated papers and it measures the paper's surface strength resistance to picking. This test is not useful for felted papers such as blotters or roofing felts or some coated papers with thermoplastic resins in the coating. This method is recommended when applicable.

2 REFERENCES

TAPPI T 459
Surface Strength of Paper (Wax Pick Test)

U.S. CUSTOMS LABORATORY METHODS

USCL Method 48-51 INDEX

Recommended Guidelines for Analysis of Paper Coatings

SAFETY PRECAUTION

This method does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 SCOPE AND FIELD OF APPLICATION

The following list of references contains procedures which should proved useful in the analysis of paper provided for in Chapter 48 HTSUS. This list is being provided for general guidance and should not be considered exhaustive.

2 REFERENCES

Chemical Analysis of Constituents in Coatings and Surface Treatments of Paper and Board, in ***Analysis of Paper***
B.L. Browning
Marcel Dekker, New York, 1977

Methods for Analyzing Paper and Paperboard Coatings, in ***Analysis of Paper***
B.L. Browning
Marcel Dekker, New York, 1977